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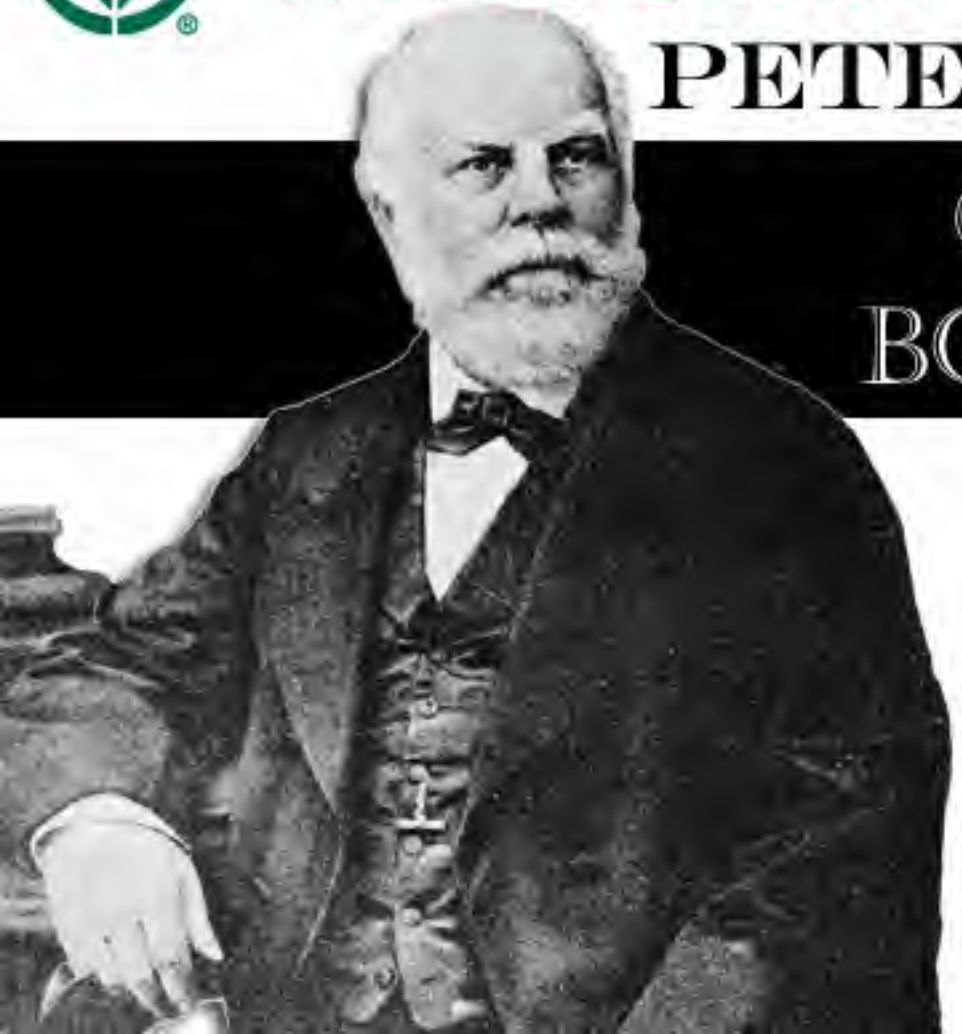
George Engelmann Botanical Notebooks



Pagination Note:
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TEMPERATURE.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1°F.
1862...	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	56.4°F.

RELATIVE HUMIDITY.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862...	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8

III. *Yearly mean of Positive Electricity of Temperature, and of Relative Humidity of the Atmosphere, at the hours of* 6, 9, 12, 3, 6 *and* 9, *from morning till night, based upon daily observations at these hours through the years* 1861 *and* 1862, *at St. Louis, Mo.*

ELECTRICITY.

	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
1861	8.6	10.0	9.2	7.9	8.7	6.9
1862	8.9	10.0	9.1	7.3	8.1	6.8

TEMPERATURE.

1861	48.9° F...	54.9	61.6	63.6	59.3	54.3
1862	48.9	55.0	60.9	62.3	58.0	53.6

RELATIVE HUMIDITY.

1861	86.4	71.3	60.3	57.2	65.1	77.3
1862	85.3	70.6	60.0	57.5	67.6	78.0

312-325-

0 cm 1 2 3 4 5 6 7 8 9 10
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	112	191	211	230	259	265	351	550	S.E.	50

V. *Positive or Negative Electricity in the Observations of* '61 & '62.

	Positive Electricity.		Negative Electricity.		No Electricity, or 0.		Highest Positive Electricity.	
	1861.	1862.	1861.	1862.	1861.	1862.	1861.	1862.
Jan.....	179	179	3	5		2	40°	40°
Feb.....	162	166	6	2			34	33
March ...	168	179	15	8			30	48
April	157	157	12	22	1	1	33	52
May.....	171	180	17	5	1	3	25	32
June	162	143	5	2	8	20	16	21
July.....	183	153	3	8	1	24	14	11
August..	176	143	5	4	6	40	15	19
Sept.....	169	117	1	1	10	61	18	23
Oct.....	162	143	4	3	20	41	33	35
Nov.....	172	157	2	7	6	16	42	42
Dec.....	175	166	5	0	6	17	37	35
	2046	1883	78	67	59	225	42°	52°

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0 1 2 3 4 5 6 7 8 9 10 cm
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S. marginatus

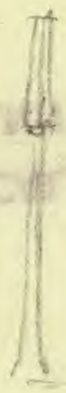
Aug 13 1861

Bear Town, Pegu

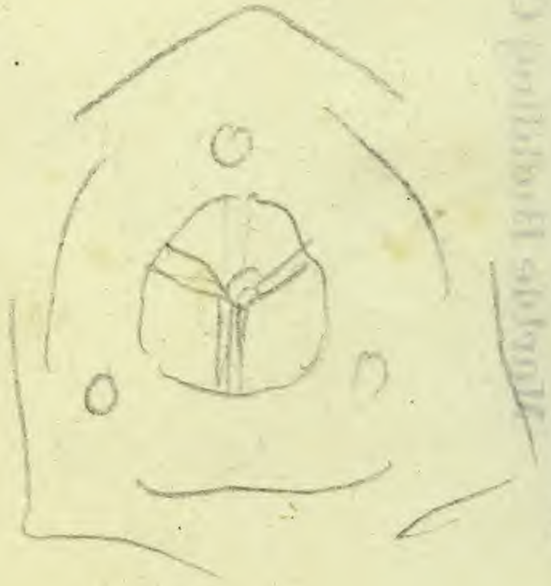
x 60

x 10

lower end



Athens Ill
E. Hall



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cm
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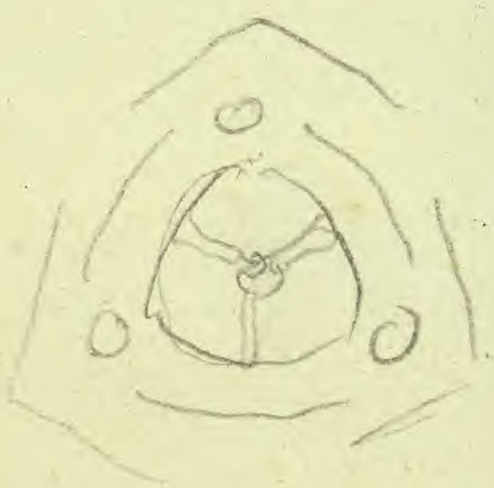
L. marginatus Aug 13 1865

Vermont, Cary

×10

×60

reversed



Sometimes specimens with single head & Maine & Ho Hall

E. Hall is same, heads 7–12 flowered

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hLCb

Nov 4 1865

D. marginatus

capitulis parvis 10–12 floris

Pine Barrens N Jers—

H6 Gray

×150

no rosters

stimulation extremely

delicate, perceptible only – good light

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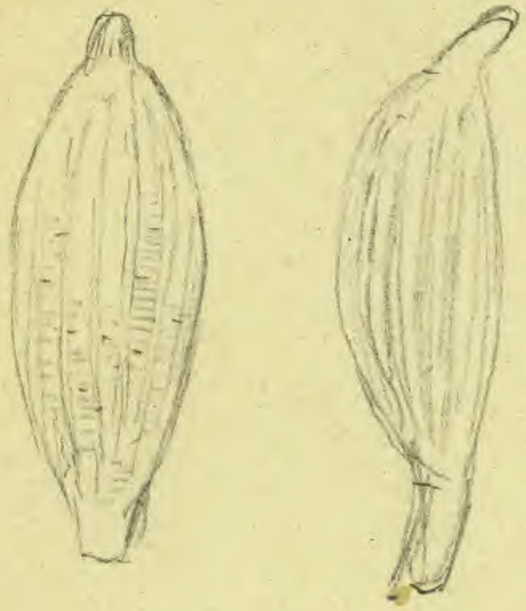
Sinnops marginatus Nov 5 1865

Houston Texas, Lindheimer

in Herb Gray

x60



GRAY HERBARIUM
HARVARD UNIVERSITY
Property of Gray Herbarium Harvard University
DUPLICATE EXCHANGED

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D. marginatus
exaltatus

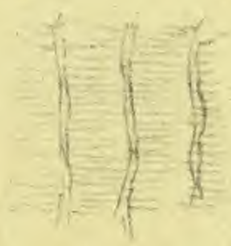
Nov 4 1865

3 pedes
N Jersey, Torrey & Hb Gray

capitula 2–4 flora
paniculæ contractæ

antheræ red

ovarium



×150

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Nov 5 1865

I. marginatus

Louisiana Hale, Hb Gray

×60

Involucre [illegible] capitula

capitula 4-5 flo

sepala, rays 2-3 fe

[illegible]

anthers [illegible]

flo just before opening

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D. marginatum

Nov 12 1865

sepalis obtusiusculis acutis

Buckley Texas ÷ Hb. Buckley

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cm
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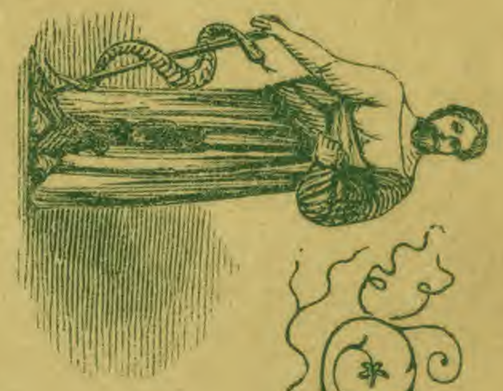

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MEYER BROS.
APOTHECARY & PHARMACEUTIST,
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I. virginiana
var biflora

April 16 1866

Wilmington Del. A Commons
Aug 1865

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cm
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BOTANICAL PAPERS
ENGELMANN

0 cm 1 2 3 4 5 6 7 8 9 10
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Dr Bigelow Oct 8 1866

I will send you also Units of the two varieties of Marginatus. — I make out the following differences

2. Marginatus. Stem stout erect flattened inclining at the base 1-3 feet high, leaves broadly linear minutely scabrous on the margins 2-5 lines wide flat, 3-5 nerved panicle decompound heads many 2-8 flowered outer sepals acute slightly awned shorter than the inner one, inner obtuse pointless as long as the globular capsule, anthers longer than the outer sepals

1 Marginatus? Var? Stem slender slightly compressed 1-2° high leafy leaves narrowly linear, margin perfectly smooth 1-2 lines wide slightly 3 nerved concave, cymose panicle heads few 3-15 flowered outer & inner sepals acute nearly equal anthers shorter than the outer sepals capsule oblong obovate.

and although their appearance & habit are so different
I think it will be difficult to make a good species of
the Megacephalæ. — I have good specimens of Gaerni
nipsit and some tolerable ones of obesi. The Brachy ampa
is too old to be good but I have collected a fine suite
such as they are. — One of the varieties of pallescens

9281B

9281A

Rec'd Oct 11th

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Detroit Oct 8th 1866.

Dear Doctor.

I have been rather at a stand still since
I received your last (Sept 24th) with the L. coarctatus from
Judge Clinton in consequence of the closing of the year with us
and preparing & sending off the annual report. That thank

Dimensions.—Length, 0.20 of an inch; width, 0.18.

The *Elæacrinus Kirkwoodensis* is nearly allied to *E.* (*Pentremites*) *melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

312-314

cm 0 1 2 3 4 5 6 7 8 9 10
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crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.

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March 29 1866.

Aug 13 1865

Senecio heterotrichus Hutt. Herb.

Lowhein No 193

×150

striated extremely fine

×60

anther seed ×10

Cl. Pleas. Grown

lower end

Nov 5th 1865

5–7 ribs visible

ribs more slender than in marginatus cross striation fine sometimes a few cross bars

imperfect seeds more slender! with more prominent ribs!

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cm
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cm 0 1 2 3 4 5 6 7 8 9 10
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Ximenia heterandra Aug 23 1865

Guadalupe Texas Wright 1850, Ximenia

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GARDEN
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Juncus cyclocarpus Mc A Coville | Nov. 11 1865

Lincoln Co N. Carol.

Sill. Journ 44. p. 83
Steud glum 2. 304

×60

×10

×150

×2

all the lower flowers sterile, ovary undeveloped, only 2-3 uppermost bearing seeds

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GEORGE

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Febr 3 1866

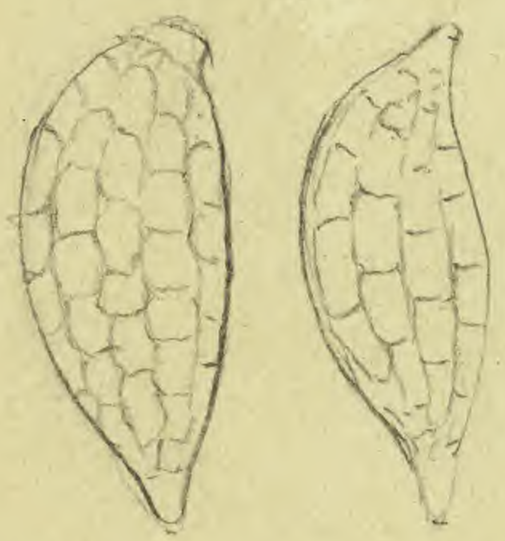
Sub nom D. platyrandos
Monte Video Baldwin
= Hab Ap. Phil

(D. platyrandos = 6 auth)

Identical with other specimens, marked
and probably also from U.S.

Georgia
Baldwin

×60

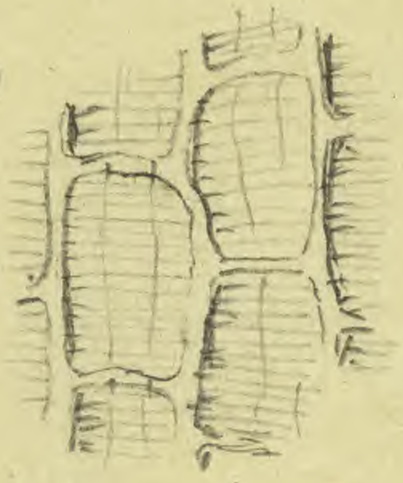


not yet in flow

(soaked)

anthers red brown
effete ones removed
as in magnification

×150



seeds ×10

seed of stem ×10

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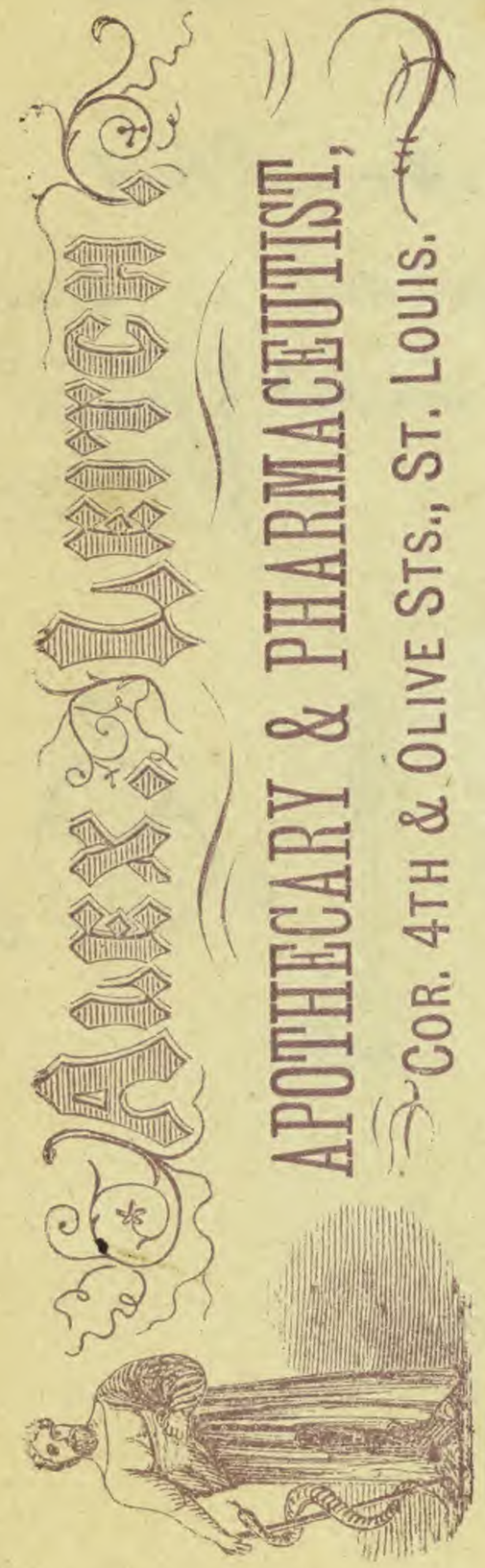

98 c 6

Sumas.

AL 21 1865

Wright Coll n Mex. 1851 No 1923 – part

= H6 gray

(mix – Smith's D. xiphioides

paniflorus

sand = H6 short

x60

anthers dark red

when dry – I

affect

hanging of the ends

between the ripens

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